

In the Claims

Please replace all prior versions and listing of the claims as follows:

1 – 24. (Cancelled)

25. (New) A method for silver staining for detecting proteins, comprising the steps of:

- applying the proteins to be detected onto or into a support for detection;
- incubating the proteins on or in the support with a bifunctional agent having the general formula X-R wherein R is a hydrophobic moiety and X is a reducing moiety;
- washing the support;
- incubating the support with the proteins thereon or therein with a solution containing silver ions; and
- applying a developing solution, characterized in that the hydrophobic moiety of the bifunctional agent is an acyloxy-radical of the general formula $-O-CO-C_nH_{(2n+1)}$ wherein n is 8 -21 and the reducing moiety of the bifunctional agent is ascorbic acid.

26. (New) The method of claim 25, wherein the bifunctional agent is selected from the group consisting of palmitoyl ascorbic acid, stearoyl ascorbic acid, myristoyl ascorbic acid and lauroyl ascorbic acid.

27. (New) The method of claim 25, wherein the solution containing silver ions is a silver nitrate solution.

28. (New) The method of claim 25, wherein the support is selected from the group consisting of a gel, a membrane, and a microarray support.

29. (New) The method of claim 28, wherein the support is a polyacrylamide or agarose gel.

30. (New) The method of claim 28, wherein the support is a PVDF or nitrocellulose membrane.
31. (New) The method of claim 28, wherein the support is a biochip.
32. (New) The method of claim 25, wherein the bifunctional agent is used in an at least partially alcoholic solution.
33. (New) The method of claim 25, wherein a complexing agent is present in the developing solution.
34. (New) The method of claim 33, wherein the complexing agent is EDTA or EGTA.
35. (New) The method of claim 33, wherein the developing solution comprises an aldehyde containing reducing agent.
36. (New) The method of claim 25, wherein the detected proteins are studied mass-spectrometrically after detection.